

January 23, 1989

MEMORANDUM TO: Mr. J. Sacolick
Mr. M. Wilson
Mr. A. Witek

SUBJECT: No STAGE.DAT File

As detailed in the IBM Install Functional Specification, no STAGE.DAT file will exist on the Prodigy Installation Disks of release 8.N. A file called PAC_OBJ.DAT will take its place. Install will create a STAGE.DAT customized to the user's configuration and based on parameters contained in PAC_OBJ.DAT. The STAGE.DAT will be filled with objects which are contained in PAC_OBJ.DAT.

The STAGE.DAT created will be either a Standard or Large type stage. Standard stages can hold the current set of objects held in the STAGE.DAT file. Large stages can hold the current set of objects plus objects marked with the new storage candidacy "Large No Versioning".

In configuring PAC_OBJ.DAT, a number of decisions must be made. These decisions involve the definition of the header values located in PAC_OBJ.DAT file. Those values are:

- Minimum Cache size
- Maximum Cache size
- Minimum Standard Stage size
- Maximum Standard Stage size
- Minimum Large Stage size
- Maximum Large Stage size

Defining these values to the optimum configuration may require research, and the purpose of this memo is to give advanced alert to the researchers / decision makers. Some of the issues are listed below:

- 1) What are the minimum required staged objects? How small can a Standard stage be and still perform well?
- 2) How large can a the maximum Standard stage be and not require more RAM space than can be assigned in a 512K (refer to note) machine?
- 3) What are reasonable minimum and maximum values for a Large stage? At what point are additional bytes allocated to a stage diminishing their return?

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4) Should the stage sizes Standard or Large be of fixed size? For example if only 200 Standard stagable objects were defined on the host Standard stages could be assigned only enough bytes to hold them.

5) Should the stage sizes Standard or Large be variable size? For example assume the number of Standard or Large objects on the host is greater than the amount of room on the stage. Consider the example below:

350 objects are defined as stageable on Standard stages. One user installation might have a Standard stage which can handle 200 objects. Another might have a Standard stage which can handle 300 objects.

If this is the case the allocation of additional bytes may provide performance benefit to the user with the stage which can handle 300 objects. On the other hand the user with the 200 object stage may suffer a performance loss due to the increase in thrashing.

6) Perhaps the size of Standard stages should be fixed and Large stages allow variable sizes.

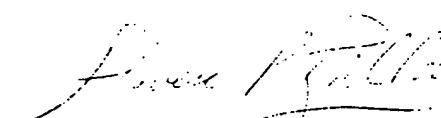
7) How many Standard or Large objects should be included in PAC_OBJ.DAT? The tradeoff here is between package disk space and initial performance.

8) How much space should be allocated to the cache file.

Thanks for your cooperation in working out these details. Your comments and questions are welcome.



Cosmo Scrivanich



Steve Rielley

Note: The IBM Functional Spec states in a 512k environment the Minimum Standard stage value will always be the size of the stage. The design has been updated to allow 512k machines to make variable sized stages in the range between the Minimum small stage and Maximum small stage value.

cc: Mr. L. A. Abrahams
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